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EXAMINER

CLARK, ISAAC R

ART UNIT PAPER NUMBER

2154

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,008

Applicant(s)

SHIN, SANG-HYUN

Examiner

Isaac R Clark

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-9 and 12-15 are presented for examination

Response to Amendment

2. The objections to claims 2, 3, and 7 are withdrawn in view of the Applicant's amendment to the claims.
3. Applicant's arguments, see page 6, second full paragraph, filed 09/15/2004, with respect to the rejection(s) of claim(s) 1-6 under 35 USC § 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of a newly identified reference.
4. As per claim 8 the Applicant argues that Voit (US Patent 6, 075,783) does not disclose the application as claimed because Voit discloses the communication module, controller and database are all part of a single component (the DNS) rather than separate elements (Applicant's remarks page 6, first paragraph). The examiner respectfully traverses the Applicant's argument.
5. The examiner points out that the DNS itself is composed of components or elements (col. 9, line 25) including a computer programmed to carry out various functions (col. 9, lines 25-28). The elements computer plus the associated sets of software modules constitute the controller, database, and communication module described in the claim.
6. Applicant's arguments with respect to claims 7, and 9-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

7. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 5 is self-contradictory because it describes transmitting an IP address to a plurality of terminals if the IP address is registered, but states that the plurality includes the first terminal if the IP address is not registered. Because of the contradictory conditionals, it is impossible to determine the meaning of the claim. For the purpose of examining the claim, it is assumed that the Applicant intended to remove the phrase "if the IP address is registered" to address the objection in the earlier office action.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 2, 5, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namma et al. (US Patent 6,185,616 filed 07/21/1997), hereinafter Namma in view of Aoki (US 5,983,090 filed 04/1/1997).

11. As per claim 1, Namma teaches a method of performing an Internet protocol (IP)-based communication between terminals, the method comprising the steps of:

(a) receiving a request for an IP address of a second terminal 2 from a first terminal 1 (col. 5, lines 1-4);

(b) upon receipt of the request, checking whether an IP address corresponding to the second terminal is registered (col. 5, lines 10-17, Fig. 3); and

(c) if the IP address is not registered, assigning an IP address to the second terminal corresponding to information from an IP address server (col. 5, lines 25-34).

12. Namma does not explicitly teach assigning IP addresses to wireless terminals for IP base communications.

13. Aoki teaches assigning IP addresses to wireless terminals for establishing a communications link between the terminals (at least col. 5, lines 27-34).

14. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Namma and Aoki because they both deal with establishing IP sessions between stations where the first station does not know the IP address of the destination. Furthermore, the teaching of Aoki to modify the IP address assigning process taught by Namma with wireless terminals would enable IP based communications to mobile terminals even though the call initiator does not know the IP address of the second terminal (Namma, col. 1, lines 30-40).

15. As per claim 2, Namma teaches the method of claim 1, wherein in the step (a), the request for an IP address is made using a telephone number (col. 5, lines 9-13), and wherein in the step (b), checking whether an IP address corresponds to the second terminal is carried out by checking whether the telephone number corresponds to the second terminal (Fig. 3, col. 13-21).

16. As per claim 5 (as construed), Namma teaches the method of claim 1, further comprising the step of transmitting the IP address to one of a plurality of terminals if the

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IP address is not registered, said plurality of terminals including said first terminal 1 (Fig. 1, col. 8, lines 17-20).

17. As per claim 13, Namma and Aoki as applied to claim 1 teach the method of claim 1, wherein the first terminal is a first wireless terminal and the second terminal is a second wireless terminal (at least col. 5, lines 27-34).

18. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namma and Aoki as applied to claim 1, and further in view of Ray et al. (hereinafter Ray), US 6,067,529.

19. As per claim 3, Namma fails to teach the method of claim 1, further comprising the step of sending a notice requesting the second terminal to establish an IP connection if the IP address is not registered.

20. Ray teaches the method of claim 1 further comprising the step of sending a notice requesting the second terminal to establish an IP connection if the IP address is not registered (Col 3, lines 45-50, customer provides alias address which is telephone number; Col 4 lines 17-22, alias address sent by SMS to a Gatekeeper; Gatekeeper converts alias address to IP address, Col. 4 lines 25-30). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Namma and Ray because they both deal with establishing IP sessions between a first terminal and a second terminal where the IP address of the second terminal is not known to the first terminal. Furthermore, the teaching of Ray to send a notice via SMS to request the second terminal to establish an IP connection would allow

the first terminal to reach the second even when the second terminal had not previously taken the step of registering an address with the name server.

21. As per claim 4, Namma in view of Ray as applied to claim 3 teaches the method of claim 3 wherein the notice requesting the second terminal to establish an IP connection using a Short Message Service (SMS) (Col 4, lines 17-22).

22. Claim 6 is are rejected under 35 U.S.C. 103(a) as being unpatentable over Namma and Aoki as applied to claim 5, and further in view of 'Official Notice'.

23. Namma teaches that the method of claim 5 wherein IP address is transmitted to one or more terminals over an IP network (Fig. 1, col. 8, lines 17-20) but does not explicitly teach the method of claim 1 wherein the IP address is transmitted to said one of a plurality of terminals using transmission control protocol/internet protocol (TCP/IP) or user datagram protocol/internet protocol (UDP/IP). However the Examiner takes 'Official Notice' that TCP/IP is the most prevalent protocol used to interconnect hosts on the Internet. It would have been obvious to one of ordinary skill in this art at the time the invention was made to transmit the IP address to one of a plurality of terminals using transmission control protocol/internet protocol (TCP/IP), because TCP/IP provides a reliable (end-to end error recovery) and standard means of communicating IP addresses over the Internet.

24. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curry et al. (hereinafter Curry) US 6,359,880 in view of Martin et al. (hereinafter Martin) US 6,614,788.

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25. As per claim 7, Curry teaches a communication system having a first wireless terminal 1 and a second wireless terminal 1 (Fig .1 col. 5, lines 27-29), an Internet protocol (IP) address server (Col. 18, lines 51-54, "DHCP Server"), and a name server (Fig. 1, item 51) for providing an IP address at the request of the first terminal, wherein the name server comprises:

a database for storing IP addresses corresponding to telephone numbers of a plurality of terminals, said plurality of terminals including the second wireless terminal (col. 9, lines 47-54); and

a controller which assigns an IP address to the second wireless terminal corresponding to information from the IP address server, if the IP address of the second wireless terminal that is requested by the first wireless terminal using a telephone number is not registered (col. 18, lines 51-54: server obtains a temporary address for terminal using a DHCP server).

26. Curry does not teach that the IP address obtained from the IP server is registered in the database.

27. Martin teaches the communication system of claim 7 wherein the IP address obtained from the IP server is registered in the database (Fig 11, steps 152-156; Col 2, lines 35-42; Col 3, lines 12-15, telephone number stored with IP address). It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teachings of Curry and Martin because they both deal with the dynamic assignment of IP addresses. Furthermore, the teaching of Martin to register the phone number and IP address in a database would result in a centralized database from which

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network addresses could be retrieved for future communications with clients (Martin, Col. 2 lines 3-4).

28. As per claim 15, Curry teaches the communication system of claim 7 further comprising a communication module unit which sends the assigned IP address to the first wireless terminal (col. 20 line 67-col. 21, line 3).

29. Claims 8, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Voit (US 6,075,783) in view of Curry et al. (hereinafter Curry) US 6,359,880.

30. As per claim 8, Voit teaches a name server in an internet protocol (IP)-based communication system comprising:

a communication module unit for sending and receiving IP-based data (Col. 9 lines 40-43; Col. 12, lines 58-62);

a controller for registering telephone numbers and requests for translation of telephone numbers into IP addresses (Col. 9, lines 18-27); and

a database for storing IP addresses and telephone numbers as determined by the controller (Col. 9, lines 30-33), wherein the communication module unit sends and receives IP-based data to and from external devices (col. 10, lines 43-45: IP address sent to called PC)

31. Voit fails to teach that the external devices include address servers.

32. Curry teaches a communication system including a DHCP address server which obtains IP addresses for called parties and provides them to the communication controller (col. 18, lines 51-54).

33. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Voit and Curry because they both deal with establishing IP based communications between wireless terminals. Furthermore, the teaching Curry to modify the communication system of Voit to include communications with external IP servers would allow dynamically assigning IP addresses allowing efficient usage of IP addresses with terminals that are not permanently connected.

34. As per claim 9, Voit teaches the name server of claim 8 wherein the name server further comprises a memory for storing a program for operating the controller (Col. 9, lines 17-19).

35. As per claim 12, Voit teaches the name server of claim 8 wherein the controller receives requests for translation of telephone numbers into IP addresses from the communication module unit (Col 9, lines 30-34).

36. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Voit and Curry as applied to claim 8 above, and further in view of Menon et al. (US Published Application 2001/0022784) hereinafter Menon.

37. As per claim 14, Voit does not explicitly teach the name server of claim 8, wherein the telephone numbers are telephone numbers of wireless terminals.

38. Menon teaches a name server system 10 which translates the telephone numbers of a first and second wireless terminal 17 into IP addresses (Fig. 1, Paragraph 0100: two end user wireless terminals, Paragraph 0102 and 0103: registering of telephone numbers and IP addresses for wireless terminals and translation of phone

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numbers into IP addresses, Paragraph 0075: assigning of IP addresses to mobile terminals).

39. It would have been obvious to one of ordinary skill in this art at the time the invention was made to combine the teaching of Voit and Menon because they both deal with IP based communication between terminals. Furthermore, the teaching of Menon to modify the name server taught by Voit to support assigning IP addresses to wireless terminals and mapping the phone numbers to IP addresses allows support for packet data services such as facsimile and VOIP for mobile stations (See Menon, paragraphs 0009-0011).

Conclusion

40. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents and publication are cited to further show the state of this art with respect to "IP-based communication system between terminals and method thereof."

- i. US 6,614,774 Wang Assigning IP address to wireless terminals using DHCP and registering in DNS server
- ii. US 6,104,711 Voit DNS translation of phone numbers to IP addresses for IP based communications


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac R Clark whose telephone number is (571)272-3961. The examiner can normally be reached on Monday-Friday 8:00am-4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IRC

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